



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|------------------------|------------------|
| 09/706,960 | 11/06/2000 | Scott A. Cluff | MICE-0091-US(00.00902) | 8488 |

7590 07/21/2005

Dan C Hu
Trop Pruner & Hu PC
8554 Katy Freeway
Suite 100
Houston, TX 77024

EXAMINER

CHU, GABRIEL L

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

2114

DATE MAILED: 07/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

87.-

MAILED

JUL 20 2005

Technology Center 2100



UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 09/706,960
Filing Date: November 06, 2000
Appellant(s): CLUFF ET AL.

Dan Hu
Reg. No. 40025
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 12 May 2005.

10

(1) *Real Party in Interest*

A statement identifying the real party in interest is contained in the brief.

(2) *Related Appeals and Interferences*

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) *Status of Claims*

The statement of the status of the claims contained in the brief is correct.

(4) *Status of Amendments After Final*

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) *Summary of Invention*

The summary of invention contained in the brief is correct.

(6) *Issues*

The appellant's statement of the issues in the brief is substantially correct. The changes are as follows:

Claims 1, 2, 9-11, 30, and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 5713024 to Halladay in view of US 5627964 to Reynolds et al.

Claim 3-7 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over over US 5713024 to Halladay in further view of US 5627964 to Reynolds et al. as applied to claim 1 above, in further view of "Introduction" from TCP/IP Illustrated, Volume 1 by W. Richard Stevens.

These changes are a mere correction of an obvious error concerning dependent claim 3 and its dependent claims 4-7 and 32 (since dependent claims further limit the claims from which they depend, the rejection of the dependent claims clearly cannot include fewer references than the rejection of the parent claims).

(7) Grouping of Claims

The rejection of claims under their respective grounds stand or fall together because appellant's brief does not include a statement that this grouping of claims does not stand or fall together and reasons in support thereof. See 37 CFR 1.192(c)(7).

(8) Claims Appealed

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9) Prior Art of Record

| | | |
|---------|-----------------|---------|
| 5713024 | HALLADAY | 1-1998 |
| 5627964 | REYNOLDS ET AL. | 5-1997 |
| 6381694 | YEN | 4-2002 |
| 4972316 | DIXON ET AL. | 11-1990 |

Stevens, W.R., "Introduction", TCP/IP Illustrated, Volume 1: The Protocols, Addison-Wesley, 1994, pg. 1.

(10) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2114

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1, 2, 9-11, 30, and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 5713024 to Halladay in view of US 5627964 to Reynolds et

al. Referring to claim 1, Halladay discloses an interface to a network (Figure 1, elements 2, 5, 6, 16, and the communication path between 16 and 20.);

a first operational element to perform one or more tasks in the system (From line 2 of column 8 Halladay discloses a hard drive.);

and a backup device to enable access of the network through the interface in response to failure of the first operational element (From the abstract Halladay discloses the "apparatus automatically formats the computer system memory in response to a failure thereof and automatically restores the operating system, all application programs and every data file that is selected by the user to be monitored and preserved by this apparatus. From line 44 of column 3 Halladay discloses the backup data is accessible via network.).

Although Halladay do not specifically disclose a storage element containing a flag to indicate if a fault has occurred with the first operational element, using a flag that indicates a fault so as to initiate a recovery program is well known in the art. An example of this is shown by Reynolds et al., from line 20 of column 6, wherein Reynolds discloses checking a "special flag" to determine whether fail-safe mode is to be established in response to a previous failure. A person of ordinary skill in the art at the time of the invention would have been motivated to use a flag to initiate recovery

Art Unit: 2114

because, from the abstract, Halladay makes it clear that automation is important, "This apparatus automatically formats the computer system memory in response to a failure thereof and automatically restores", and Reynolds discloses that it is desirable to automate the boot disk process via automation from line 57 of column 1 to line 18 of column 2.

2. Referring to claim 2, Halladay in view of Reynolds discloses the first operational element comprises a disk drive (From line 2 of column 8 Halladay discloses a hard drive.).

3. Referring to claim 9, Halladay discloses the backup device comprises a removable disk drive (From line 1 of column 8 Halladay discloses a cold boot floppy disk.).

4. Referring to claim 10, Halladay discloses the backup device to retrieve user data and software over the network to recover the system (From line 44 of column 3 Halladay discloses the backup data is accessible via network. From line 45 of column 8 Halladay discloses application programs and application data.).

5. Referring to claim 11, Halladay discloses the first operational element comprises a storage element (From line 2 of column 8 Halladay discloses a hard drive.),

the backup device to retrieve an image of the storage element to recover the storage element to its operational state (From line 55 of column 4 Halladay discloses a dump of the contents of the hard drive used for backup. From line 60 of column 6 Halladay discloses backup data used to restore the entirety of the computer system memory.).

Art Unit: 2114

6. Referring to claim 30, Halladay in view of Reynolds et al. discloses a BIOS routine to detect a state of the flag, the BIOS routine to access the backup device in response to detecting that the flag indicates the fault (From line 20 of column 6 Reynolds discloses checking the special flag with basic input-output components.).

7. Referring to claim 31, Halladay discloses the software comprises operating system software (Figure 1, element 19.).

8. **Claims 3-7 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over over US 5713024 to Halladay in further view of US 5627964 to Reynolds et al. as applied to claim 1 above, in further view of "Introduction" from TCP/IP Illustrated, Volume 1 by W. Richard Stevens.** Referring to claim 3, Halladay discloses the backup device comprises a backup storage element containing a backup routine adapted to perform communications through the interface to the network (From line 44 of column 3 Halladay discloses the backup data is accessible via network.).

Although Halladay in view of Reynolds et al. does not specifically disclose the interface comprises a network stack having an IP layer, using IP in networking is extremely well known in the art. An example of this is shown by Stevens, from page 1, "The TCP/IP protocol suite allows computers of all sizes, from many different computer vendors, running totally different operating systems, to communicate with each other.... It forms the basis for what is called the worldwide Internet, or the Internet, a wide area network (WAN) of more than one million computers that literally spans the globe." A person of ordinary skill in the art at the time of the invention would have been motivated to use IP because from page 1 of Stevens, "The TCP/IP protocol suite allows computers of all

Art Unit: 2114

sizes, from many different computer vendors, running totally different operating systems, to communicate with each other.... It forms the basis for what is called the worldwide Internet, or the Internet, a wide area network (WAN) of more than one million computers that literally spans the globe.”

9. Referring to claim 4, Halladay in view of Reynolds discloses the backup routine comprises a browser (From line 3 of column 5 Halladay discloses a user interface for the user to choose elements to be protected. From line 67 of column 6 Halladay discloses the cold boot data backup system “locates and retrieves each identified data file from the backup media 21.” From line 14 of column 2 Reynolds discloses a user interface for fixing problems of the system.).

10. Referring to claim 5, Halladay discloses the first operational element comprises a first disk drive (From line 2 of column 8 Halladay discloses a hard drive.),

and wherein the backup storage element comprises a second disk drive separate from the first disk drive (From line 1 of column 8 Halladay discloses a cold boot floppy disk.).

11. Referring to claim 6, Halladay discloses the second disk drive has a smaller storage capacity than the first disk drive (From line 1 of column 8 Halladay discloses a cold boot floppy disk storing a subset of programs and data to execute the hard drive restore process.).

12. Referring to claim 7, Halladay discloses the backup storage element comprises non-volatile memory (From line 1 of column 8 Halladay discloses a cold boot floppy disk.).

Art Unit: 2114

13. Referring to claim 32, Halladay in view of Reynolds et al. discloses the backup device is adapted to retrieve an image containing user data and operating system software over the network in response to the flag (From line 20 of column 6 Reynolds discloses checking the special flag with basic input-output components, said special flag initiating recovery. From line 55 of column 4 Halladay discloses a dump of the contents of the hard drive used for backup. From line 60 of column 6 Halladay discloses backup data used to restore the entirety of the computer system memory.).

14. **Claim 8 rejected under 35 U.S.C. 103(a) as being unpatentable over US 5713024 to Halladay in view of US 5627964 to Reynolds as applied to claim 1 above, and further in view of US 6381694 to Yen.** Referring to claim 8, although Halladay in view of Reynolds et al. do not specifically disclose the first operational element comprises a disk drive having plural partitions, and wherein the backup device comprises one of the partitions, using a partition for recovery is known in the art. An example of this is shown by Yen, from line 66 of column 1 (with emphasis), "In accordance with the present invention, the foregoing objective is achieved by means of **a user-hidden secondary volume or partition** in the computer permanent storage mechanism, e.g., hard disk. If an error is detected which would normally result in an operational failure, the computer branches to recovery software stored in the secondary volume." A person of ordinary skill in the art at the time of the invention would have been motivated to have a second partition for recovery because, from line 17 of column 4, "The recovery software is located in a separate area of permanent storage, rather than the main area, to ensure its reliability."

15. Claims 14 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 5713024 to Halladay in view of "Introduction" from TCP/IP Illustrated, Volume 1 by W. Richard Stevens. Referring to claim 14, Halladay discloses detecting if an operating portion of the system has experienced a fault (From line 57 of column 1, "If a failure occurs, the cold boot data backup system performs the data file location, retrieval and restore operations, independent of the user.");

accessing a backup device to enable communication over a network (From line 45 of column 8 Halladay discloses using the cold boot application program to restore the hard drive. From line 44 of column 3 Halladay discloses the backup data is accessible via network.);

retrieving data over the network, the data comprising an image containing user data and an operating system (From line 55 of column 4 Halladay discloses a dump of the contents of the hard drive used for backup. From line 60 of column 6 Halladay discloses backup data used to restore the entirety of the computer system memory.);

recovering the system using the image (From line 57 of column 8 Halladay discloses recovering using the backup data.).

loading a backup software routine from the backup device (From line 57 of column 7 Halladay discloses a cold boot floppy disk.).

the backup software routine comprises a browser, the method further comprising executing the browser to access the network to retrieve the data (From line 3 of column 5 Halladay discloses a user interface for the user to choose elements to be protected. From line 67 of column 6 Halladay discloses the cold boot data backup system "locates

and retrieves each identified data file from the backup media 21.”).

Although Halladay does not specifically disclose the network for communication and retrieving, via a browser, uses a network stack including an Internet Protocol (IP) layer, using IP in networking is extremely well known in the art. An example of this is shown by Stevens, from page 1, “The TCP/IP protocol suite allows computers of all sizes, from many different computer vendors, running totally different operating systems, to communicate with each other.... It forms the basis for what is called the worldwide Internet, or the Internet, a wide area network (WAN) of more than one million computers that literally spans the globe.” A person of ordinary skill in the art at the time of the invention would have been motivated to use IP because from page 1 of Stevens, “The TCP/IP protocol suite allows computers of all sizes, from many different computer vendors, running totally different operating systems, to communicate with each other.... It forms the basis for what is called the worldwide Internet, or the Internet, a wide area network (WAN) of more than one million computers that literally spans the globe.”

16. Referring to claim 20, Halladay discloses booting from a backup storage device instead of the main storage device if the system has experienced a fault (From line 57 of column 7, “The cold boot apparatus 10 typically consists of an application program resident on computer system 1, which is used as described herein to create a cold boot floppy disk which is used to cold boot the computer system I in the event the memory of computer system 1 false and must be completely restored.”);

using the backup storage device to enable communications over a network to retrieve an image to recover the system, wherein the image comprises user data and an

Art Unit: 2114

operating system (From line 44 of column 3 Halladay discloses the backup data is accessible via network. From line 55 of column 4 Halladay discloses a dump of the contents of the hard drive used for backup. From line 60 of column 6 Halladay discloses backup data used to restore the entirety of the computer system memory.).

loading a routine from the backup storage device to enable the network communication through the network wherein loading the routine comprises loading a browser (From line 57 of column 7 Halladay discloses a cold boot floppy disk. From line 3 of column 5 Halladay discloses a user interface for the user to choose elements to be protected. From line 67 of column 6 Halladay discloses the cold boot data backup system "locates and retrieves each identified data file from the backup media 21.").

Although Halladay does not specifically disclose the network uses a network stack including an Internet Protocol (IP) layer, using IP in networking is extremely well known in the art. An example of this is shown by Stevens, from page 1, "The TCP/IP protocol suite allows computers of all sizes, from many different computer vendors, running totally different operating systems, to communicate with each other.... It forms the basis for what is called the worldwide Internet, or the Internet, a wide area network (WAN) of more than one million computers that literally spans the globe." A person of ordinary skill in the art at the time of the invention would have been motivated to use IP because from page 1 of Stevens, "The TCP/IP protocol suite allows computers of all sizes, from many different computer vendors, running totally different operating systems, to communicate with each other.... It forms the basis for what is called the

worldwide Internet, or the Internet, a wide area network (WAN) of more than one million computers that literally spans the globe.”

17. Claims 28 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 5713024 to Halladay in view of US 4972316 to Dixon et al. and US 5627964 to Reynolds et al. Referring to claim 27, Halladay discloses a system to detect if an operating portion of the system has experienced a fault (From line 57 of column 1, “If a failure occurs, the cold boot data backup system performs the data file location, retrieval and restore operations, independent of the user.”);

access a backup device to enable communication over a network (From line 45 of column 8 Halladay discloses a cold boot application to access a backup media. From line 44 of column 3 Halladay discloses the backup data is accessible via network.);

retrieve data to recover the system over the network, the data comprising an image containing user data and operating system software (From line 55 of column 4 Halladay discloses a dump of the contents of the hard drive used for backup. From line 60 of column 6 Halladay discloses backup data used to restore the entirety of the computer system memory.);

and recovering the system using the image (From line 57 of column 8, “The data that is retrieved from the backup media 21 regarding the full and incremental backup sessions are used by the cold boot program at step 86C to create a temporary data base. The backup media read process of steps 86A and 86B are repeated for each backup media that has been created for the computer system 1 until at step 86C it is determined that the last backup media 21 has been read.”).

Art Unit: 2114

Halladay further discloses in response to the fault, formatting a storage device and subsequently storing image data in the storage device (From line 39 of column 8 Halladay discloses the disk format operation is run, the restore operation following the format.).

Although Halladay does not specifically disclose this formatting comprises scanning a storage device to determine portions of the storage device that are defective; and storing the image in portions of the storage device other than the portions that are defective, mapping out defective portions of a disk during formatting is well known in the art. An example of this is shown by Dixon et al., from line 50 of column 1, "One problem that is known in the art, arises because of the fact that defects exist in the disk storage media. Thus, sectors containing such defects are considered bad and cannot be used. Such bad sectors are normally identified by formatting and later uses thereof avoided by simply skipping a bad sector." A person of ordinary skill in the art at the time of the invention would have been motivated to map out a bad sector because, from line 52 of column 1 of Dixon et al. "sectors containing such defects are considered bad and cannot be used".

Although Halladay in view of Dixon et al. do not specifically disclose a system to set a flag in response to the fault; load a BIOS routine to detect whether the flag is set; and cause the BIOS routine to load a second routine in response to detecting the flag is set, using a BIOS to detect a flag that indicates failure, and do something in response, is well known in the art. An example of this is shown by Reynolds et al., from line 20 of column 6 Reynolds discloses basic input-output components to check the special flag

Art Unit: 2114

that is set in response to system failure, said checking to initiate system recovery. A person of ordinary skill in the art at the time of the invention would have been motivated to use a flag to initiate recovery because, from the abstract, Halladay makes it clear that automation is important, "This apparatus automatically formats the computer system memory in response to a failure thereof and automatically restores", and Reynolds discloses that it is desirable to automate the boot disk process via automation from line 57 of column 1 to line 18 of column 2.

18. Referring to claim 33, Halladay in view of Dixon and Reynolds discloses storing the retrieved data comprises storing the retrieved image containing user data and operating system software in the portions of the storage device other than the portions that are identified to be defective by the scan (From line 50 of column 1 of Dixon et al., "One problem that is known in the art, arises because of the fact that defects exist in the disk storage media. Thus, sectors containing such defects are considered bad and cannot be used. Such bad sectors are normally identified by formatting and later uses thereof avoided by simply skipping a bad sector.").

(11) Response to Argument

Extrinsic evidence showing TCP/IP for communication in a network: US 5513314 to Kandasamy et al., US 5974503 to Venkatesh et al., US 6065073 to Booth, US 6324654 to Wahl et al., and US 6578160 to MacHardy, Jr. et al.

Extrinsic evidence showing the breadth of "browser": "Browser" from Wikipedia.org, "browser" from Merriam-Webster Online Dictionary, "browser" from TechEncyclopedia.

1. Regarding Applicant's argument (A1, E1) that there is no motivation to combine Halladay and Reynolds, from the abstract, Halladay makes it clear that automation is important, "This apparatus automatically formats the computer system memory in response to a failure thereof and automatically restores" and specifically discloses a boot disk as the means by which that recovery is initiated. Reynolds discloses in the background that boot disks are used to start up an "old-style character-based operating system" (line 57 of column 1), an "antiquated technology" (line 10 of column 2). Reynolds further discloses in the summary that the invention "overcomes these limitations of known systems by allowing the user to repair a GUI-based operating system... provides automatic failure recovery through a special 'fail-safe' mode..." (line 14 of column 2). This provides clear and explicit two-way motivation to combine Halladay in view of Reynolds.

Applicant further argues that "the mere fact that the prior art could be so modified would not have made the modification obvious unless the prior art suggested the desirability of the modification. Examiner notes that had Halladay expressly suggested the use of a flag to initiate recovery that a 102(b) rejection would have been applied instead.

2. Regarding Applicant's argument (A1, E1) that even if combined Halladay in view of Reynolds does not disclose Applicant's claimed "flag", a flag is just a bit, or a Boolean indicator, it itself does not have any inherent property but 1 or 0, true or false. Applicant appears to think that it is an inherent property of this indicator that it enables access to the network, whereas its only inherent property is that it is true or false. Whatever reads

that bit is what initiates activity. Clearly Halladay intends for an automatic system, but as it was at the time, boot disks were common, and so Halladay used a boot disk, reliant upon a user, to initiate recovery. However as Reynolds clearly shows, this is not a necessary step, and indeed, can be automated by the use of a failure detector that sets a flag, the flag being detected on subsequent reboot, initiating recovery procedures.

3. Regarding Applicant's argument (A2, D1, D2) that a browser must be a web browser, no special meaning is given to the term "browser". As interpreted, a browser is simply something used for browsing. As evidence of the breadth of the term, please see above cited Wikipedia, Merriam-Webster, and TechEncyclopedia references. For example, Wikipedia recognizes that a browser may be a code browser, file browser, a help browser, or a web browser. Examiner shows a browser from line 3 of column 5 Halladay, a user interface for the user to choose elements to be protected; from line 67 of column 6 Halladay, the cold boot data backup system "locates and retrieves each identified data file from the backup media 21."; from line 14 of column 2 Reynolds, a user interface for fixing problems of the system. Further, Applicant's specification provides no support for this interpretation, either in the drawings or in the written specification. The relevant portion may refer to line 20 of page 4 wherein a browser is revealed to be "capable of executing on a processor in each node to gain access to the network 12."

4. Regarding Applicant's argument (A3, B1, D2) that there is no suggestion in Stevens that Halladay and Reynolds can be modified to incorporate an interface having an IP layer and that the only basis for incorporation was based on impermissible hindsight,

Art Unit: 2114

Examiner would first like to emphasize that what is being combined is a network protocol (TCP/IP from Stevens) with a network (Halladay's network accessible storage). While it is extremely well known that this protocol may be used in networking, Examiner has provided a reference that obviates this (Stevens), that reference giving the motivation of, from page 1 of Stevens, "The TCP/IP protocol suite allows computers of all sizes, from many different computer vendors, running totally different operating systems, to communicate with each other.... It forms the basis for what is called the worldwide Internet, or the Internet, a wide area network (WAN) of more than one million computers that literally spans the globe." However, it need not be taken at Examiner's word, or even in view of Halladay and Stevens. Examiner has provided five additional references that use TCP/IP in network communications: US 5513314 to Kandasamy et al., US 5974503 to Venkatesh et al., US 6065073 to Booth, US 6324654 to Wahl et al., and US 6578160 to MacHardy, Jr. et al.

5. Regarding Applicant's argument C1, Applicant has merely alleged patentability for claim 8 based on the alleged patentability of its parent claim 1.

6. Regarding Applicant's argument D2, Applicant merely alleges that the combination of Halladay and Stevens do not disclose the limitations of claim 20 without providing any arguments or evidence.

For the above reasons, it is believed that the rejections should be sustained.


Application/Control Number: 09/706,960
Art Unit: 2114

Page 18


Respectfully submitted,

gc
June 29, 2005

Conferees

 Bryce Bonzo
Lynne Brown and Bryce Bonzo
Primary Examiner
AU 2114

Dan C Hu
Trop Pruner & Hu PC
8554 Katy Freeway
Suite 100
Houston, TX 77024


ROBERT BEAUSOLIEL
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100